DOCUMENT RESUME

ED 167 282 PS 010 437

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TITLE A Comparison of 'Play' and 'Skills' Tutoring in Nursery Classes.
SPONS AGENCY Social Science Research Council, London (England).
PUB DATE [78]
NOTE 13p.; Filmed from best available copy

EDRS PRICE MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS Behavior Change; Comparative Analysis; *Dramatic Play; Foreign Countries; *Preschool Children; *Pretend Play; *Skill Development; Student Teacher Relationship; *Teaching Techniques; *Tutoring
IDENTIFIERS *England

ABSTRACT

This paper compares the effects of fantasy play tutoring and tutoring in specific skills on the performance of nursery school children on a battery of tests and observations. Children from two classes in each of two nursery schools participated in the study, with a total of 65 children completing pre- and post-testing as well as follow-up testing 8 weeks later. One class in each school received 8 weeks of tutoring and specific encouragement in fantasy and sociodramatic play, while the second class emphasized skills in construction activities, conceptual development, social cooperation, and problem solving. Children in all classes were free to choose whether or not to participate in the activities. Pre- and post-testing included observations of social participation, activity (attention) span, and kinds and levels of play, as well as standardized intelligence, role taking, and creativity tests. Results indicated few differences between the groups. In general, the only differences which remained consistent through the follow-up testing were the longer periods of time spent in group play, in larger subgroups, and in physical activities by the children in the play tutoring classes. (BD)

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A COMPARISON OF 'PLAY' AND 'SKILLS' TUTORING IN NURSERY CLASSES

Research: Peter Smith, Mary Dalgleish, Guy Herzmark. Tutor: Kath Aspinall
carried out with the cooperation of Sheffield L.E.A., nursery schools A and B, and with the financial support of the Social Science Research Council, London.

Introduction; Method; Results, School A; Results, School B; Conclusions.
(this is only a summary account of the research project; the full account will be lodged as a Final Report with the S.S.R.C., London).

INTRODUCTION

How useful is it to encourage fantasy and sociodramatic play in young children? Most preschool children show pretend play, but 'disadvantaged' children, who are expected to underachieve educationally, seem to show relatively little such play in home and nursery. However levels of fantasy play in preschool can be increased by adult encouragement, or 'play tutoring'. How important is this, and how would the benefits compare with other kinds of tutoring?

Previous studies in Israel and the U.S.A. have found that children who received play tutoring for a period of time, not only increased their levels of fantasy play, but also showed improvement on a variety of language, intellectual and social skills. Comparable groups of children who did not receive the play tutoring, did not improve so much.

In these earlier studies it tended to be assumed that the improvements the play tutored children showed are due to the play. It was felt that fantasy and sociodramatic play in itself helps to develop these skills. However the improvement could have been due as much or more to the tutoring - the close interaction and conversation with an adult - as to the play, itself. If so, other kinds of tutoring - encouraging perhaps skills in a more traditional way, rather than play - could be equally or more effective.

Many previous studies did compare the play-tutored groups with other kinds of tutoring (e.g. music tutoring, dimensions tutoring). But so few details were given of either kind of tutoring, that we do not really know how much tutor-child interaction there was, and whether they were even approximately matched in the play-tutored and non-play tutored groups.

The present research compares play tutoring and skills tutoring as two

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'interventions' or ways of investing extra adult time in a nursery class. It includes observations of each tutoring condition to see what kinds of interactions occur, and which children take part.

In addition to pre- and post-assessment, a foolow-up assessment was included to see if any differential improvements were maintained, and to what extent any differential improvements continued to covary with levels of fantasy play.

METHOD

The study was carried out first at two classes in nursery school A, each class with about 20 children. Subsequently, an almost identical study was carried out in two classes at nursery school B. It was intended to replicate the study in this way, to find out how robust the results would be.

The procedure at each school was as follows:

(1) children in both classes were 'pre-assessed'; both observations and test assessments were made. (a) observations of social participation, activity spans, and kinds and levels of play, from focal samples (8 x $2\frac{1}{2}$ mins., each child) and scan samples (10 x 30 mins., 2 min. intervals) in the classroom. (b) standardised tests taking about 20 mins. given to each child individually (4 WPPSI subscales, 3 role-taking tests; dog and bone). These latter were given 'blind', without knowing which condition a particular child would be in. Pre-assessment took about 2 weeks.

(2) this was followed by 8 weeks of extra tutoring in each class. One class received 'play tutoring', the other 'skills tutoring' (e.g. constructional activities, concept development, etc). Each class received one 40-minute tutoring session, each morning (about 40 in all). Children were generally free to join in the tutored activities as and when they wished. Each session, observations and radio-microphone recordings were made of the kind and amount of tutor interaction with each child. Order effects of sessions and observers were counter-balanced.

(3) the children in both classes were then 'post-assessed', in the same way as in the pre-assessment.

(4) about 8 weeks later, the children remaining in the two classes (about two-thirds of original) were given a similar, follow-up assessment.

RESULTS

I) WHAT THE TUTOR DID

Overall, there was no significant difference between the Play class and the Skills class in the average amount of time the children spent with the tutor, either at School A or School B. However, since the children were free to join the tutor as they wished, there was a lot of variation in the time individual children spent with the tutor. At School A this varied from about 2 to 16 minutes (per 40 minute session) in the Play class, and 0 to 13 minutes in the Skills class. At School B it varied from about 0 to 19 minutes in the Play class and 3 to 16 minutes in the Skills class.

At School A, boys spent more time with the tutor in the Play class, and girls in the Skills class. This was not the case at School B.

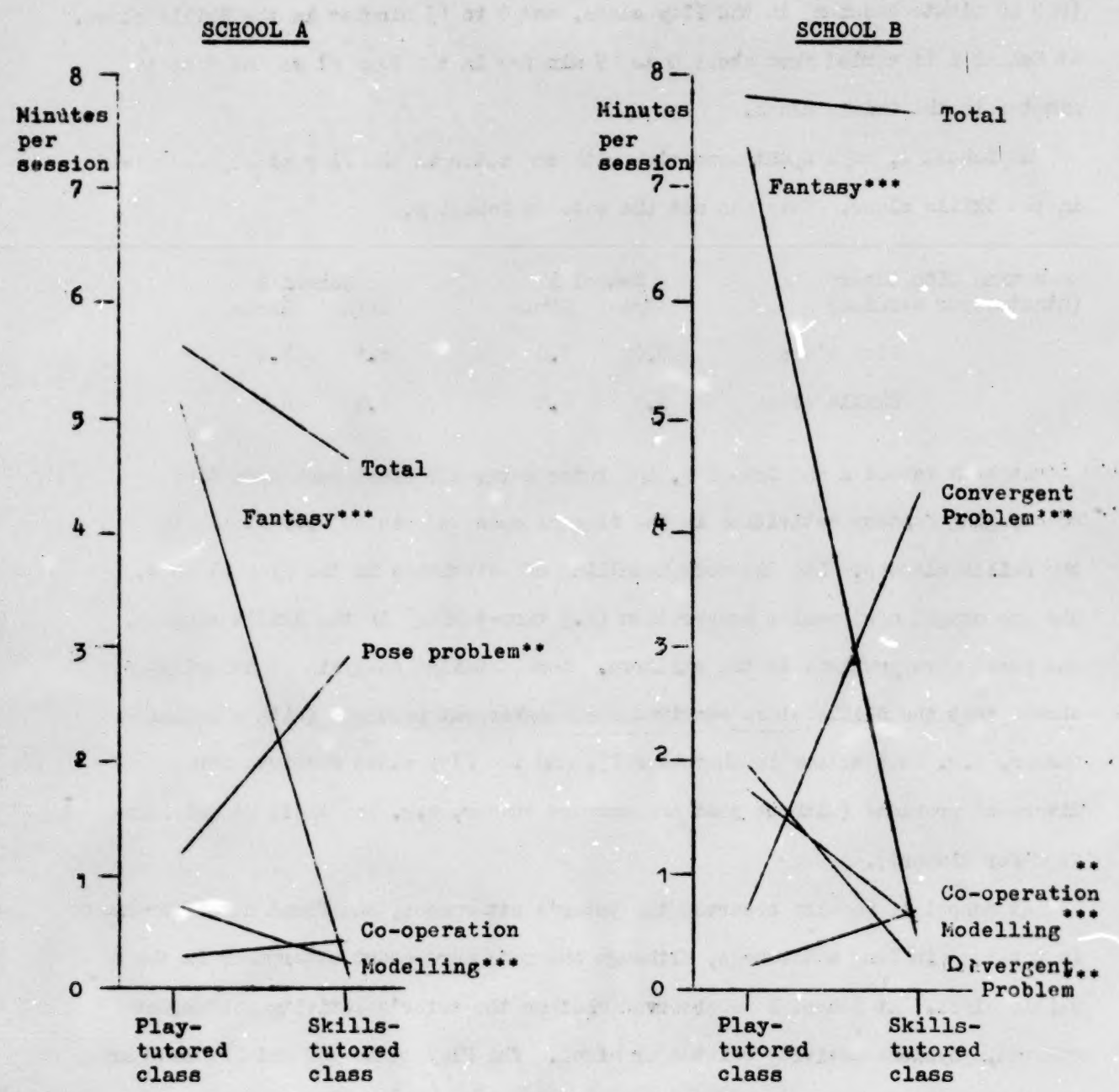
Mean time with tutor (minutes per session)	School A		School B	
	Boys	Girls	Boys	Girls
Play class	7.0	3.8	8.1	7.0
Skills class	2.3	6.2	8.4	6.9

At both School A and School B, the tutor naturally spent much more time encouraging fantasy activities in the Play classes and did so very little in the Skills classes. She did more modelling of activities in the Play classes. She encouraged more social cooperation (e.g turn-taking) in the Skills classes, and posed more problems to the children. More detailed analysis at School B showed that the Skills class received more convergent problems (with a definite answer, e.g. what colour is that block?), and the Play class received more divergent problems (without just one correct answer, e.g. how shall we get some food for dinner?).

At School A, we also observed the tutor's utterances, and found no differences in total or in long utterances, although she made more short utterances in the Skills class. At School B we observed whether the tutor's activity was object related, physical activity related or mixed. The Play class had mainly mixed or physical activity tutor interaction, the Skills class mainly object related or mixed.

Some of the similarities and differences in what the tutor did with the children in the Play and Skills classes are shown in the graphs overleaf.

Overall, the amount of tutor interaction did not vary significantly between the Play and Skills classes, as was hoped. However the kind of tutor interaction did vary, and also within classes there was a lot of variation in who the tutor interacted with. Those variations are taken up later in the Results, after the main between class differences in assessment.



Mean amount and kind of tutoring RECEIVED by the children in the two classes each session.

* $p < .05$
** $p < .01$
*** $p < .001$

2) DIFFERENCES BETWEEN THE CLASSES IN ASSESSMENT GAINS AT POST-TEST & FOLLOW-UP. Selected results are presented in this section, just for the children who were present at the pre- and post-assessments and also at the follow-up. They comprised 17 and 14 children at School A, and 14 and 18 at School B, for the Play and Skills classes respectively.

The graphs on the following 3½ pages show the mean scores in each class, at each School, for: percent fantasy play, percent group play, mean group size, attention span at activities (all scan sample data), complexity and nature of play (focal sample data), and scores on the eight test measures. In examining the graphs we are not comparing schools, but seeing if a consistent pattern is present in both schools. In particular, did one class change significantly relative to the other class between pre- and post-assessment, or pre- and follow-up assessment? On most/all of the tests the children got better (they were getting older anyway), but did one class improve more than the other?

On many aspects of the assessment, there was not much difference between the Play and Skills classes at either School. This was the case for: attention span at activities, complexity of play (inconsistent results between Schools), card (role-taking test), sentences and arithmetic (subscales of WPPSI), and dog and bone (creativity).

The Play classes showed some greater increase in percent of time in fantasy play, as was expected. At School A this was significant ($p<.01$) at post-test, but the effect had disappeared by follow-up. At School B there was no difference at post-test, but the Play class showed more fantasy play at follow-up though this did not reach conventional significance.

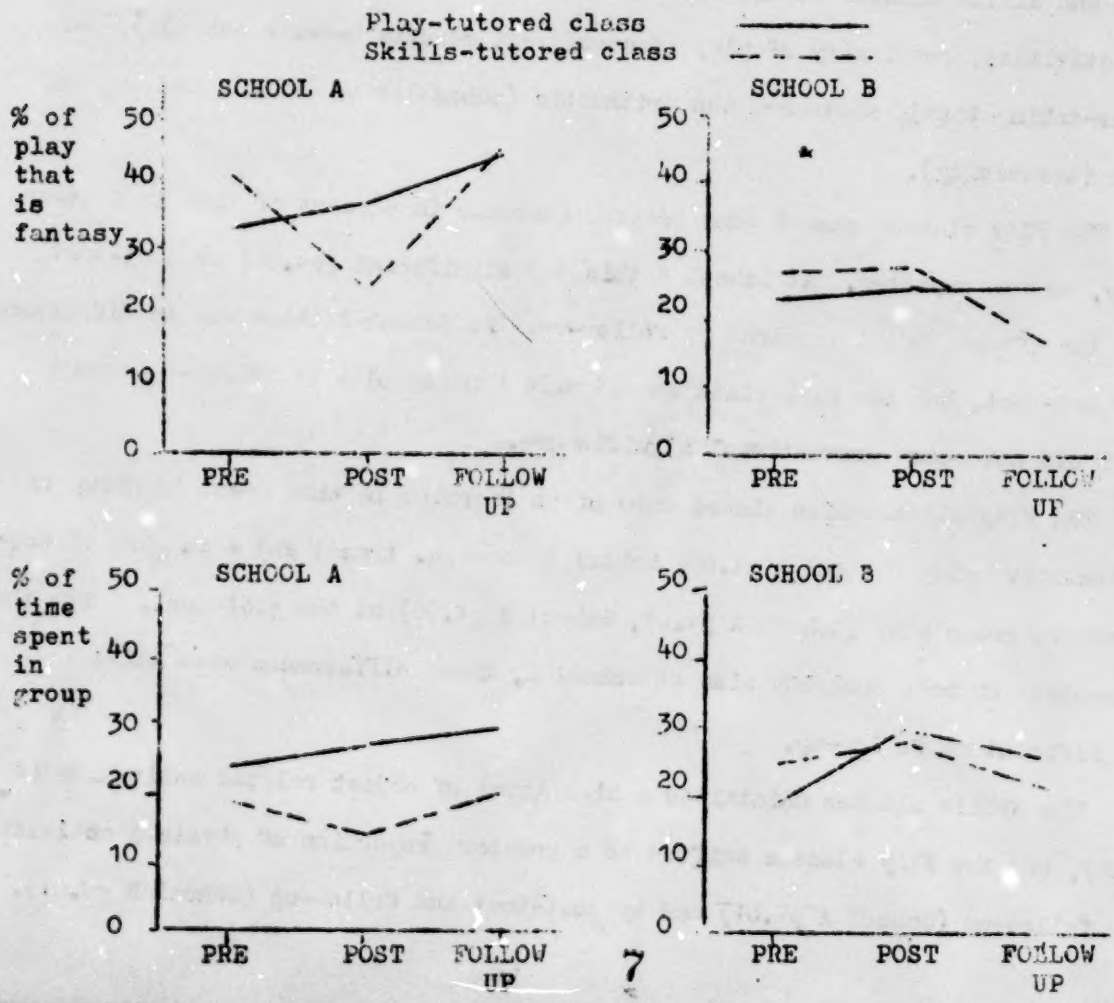
The Play classes also showed more of an increase in time spent in group or associative play (School A $p<.05$, School B non-sig. trend) and mean size of sub-group in group play (School A $p<.01$, School B $p<.05$) at the post-test. With the exception of mean subgroup size at School A, these differences were still significant at follow-up.

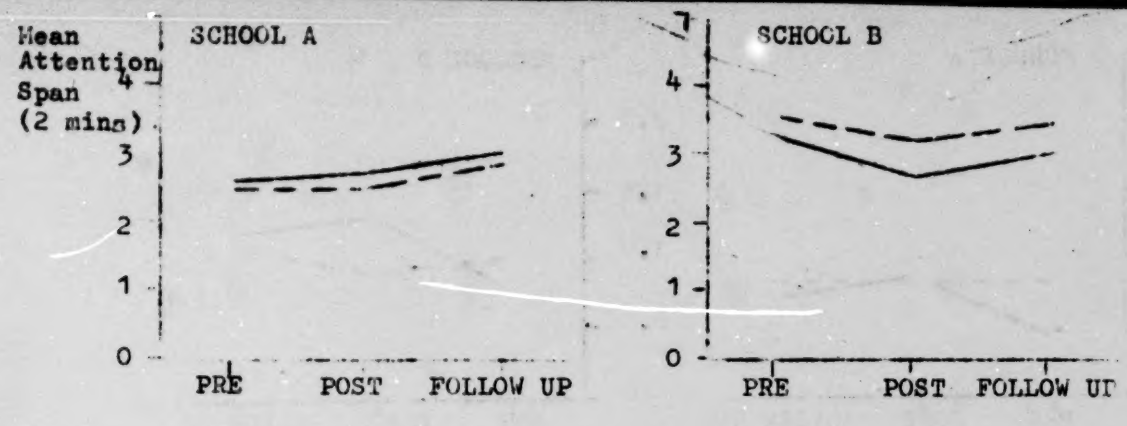
The Skills classes maintained a high level of object related activities in play, but the Play classes shifted to a greater proportion of physical activities by follow-up (School A $p<.01$) and by post-test and follow-up (School B $p<.01$).

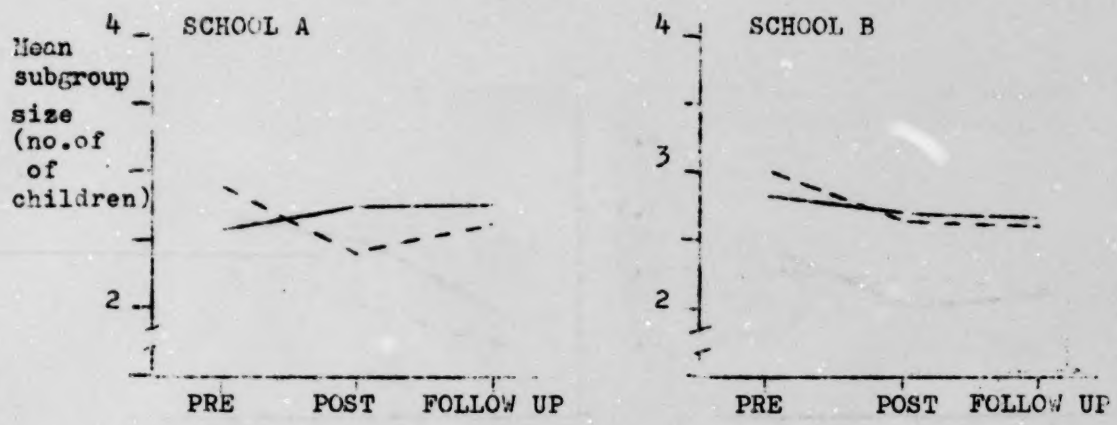
The Play classes showed a greater increase on the cube (role-taking) scores at post-test (School A non-sig. trend, School B $p<.05$). This disappeared by follow-up. They also showed a greater increase on the geometric design (WPPSI subscale) scores (School A $p<.01$, School B non-sig. trend) with a tendency (non-sig.) to be maintained at follow-up.

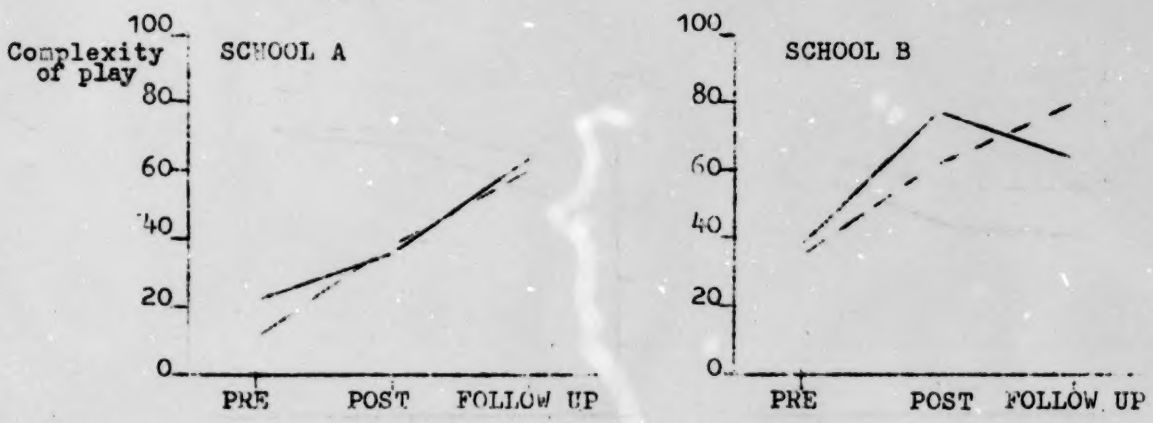
The Skills classes showed a greater tendency to increase scores on the Vocabulary (WPPSI subscale) test (School A non-sig. trend, School B $p<.05$), which disappeared by follow-up.

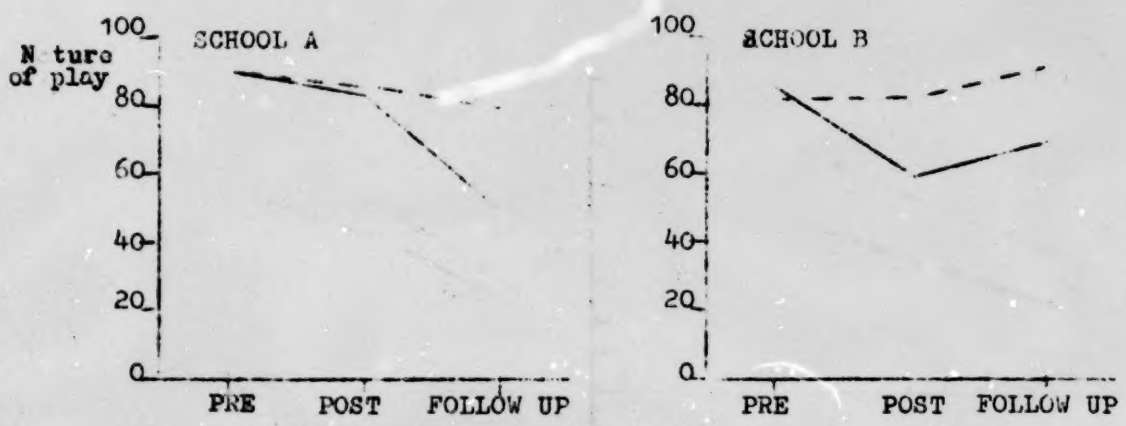
In summary, on most test scores, play complexity, and attention span at activities, Play and Skills classes improved equally. The only consistent differences maintained by follow-up were that the Play classes engaged in more group play, in larger subgroups, and rather more in physical activities. Of the test scores, only the geometric design (copying shapes) showed some advantage to the Play classes at follow-up, and these were not statistically significant.



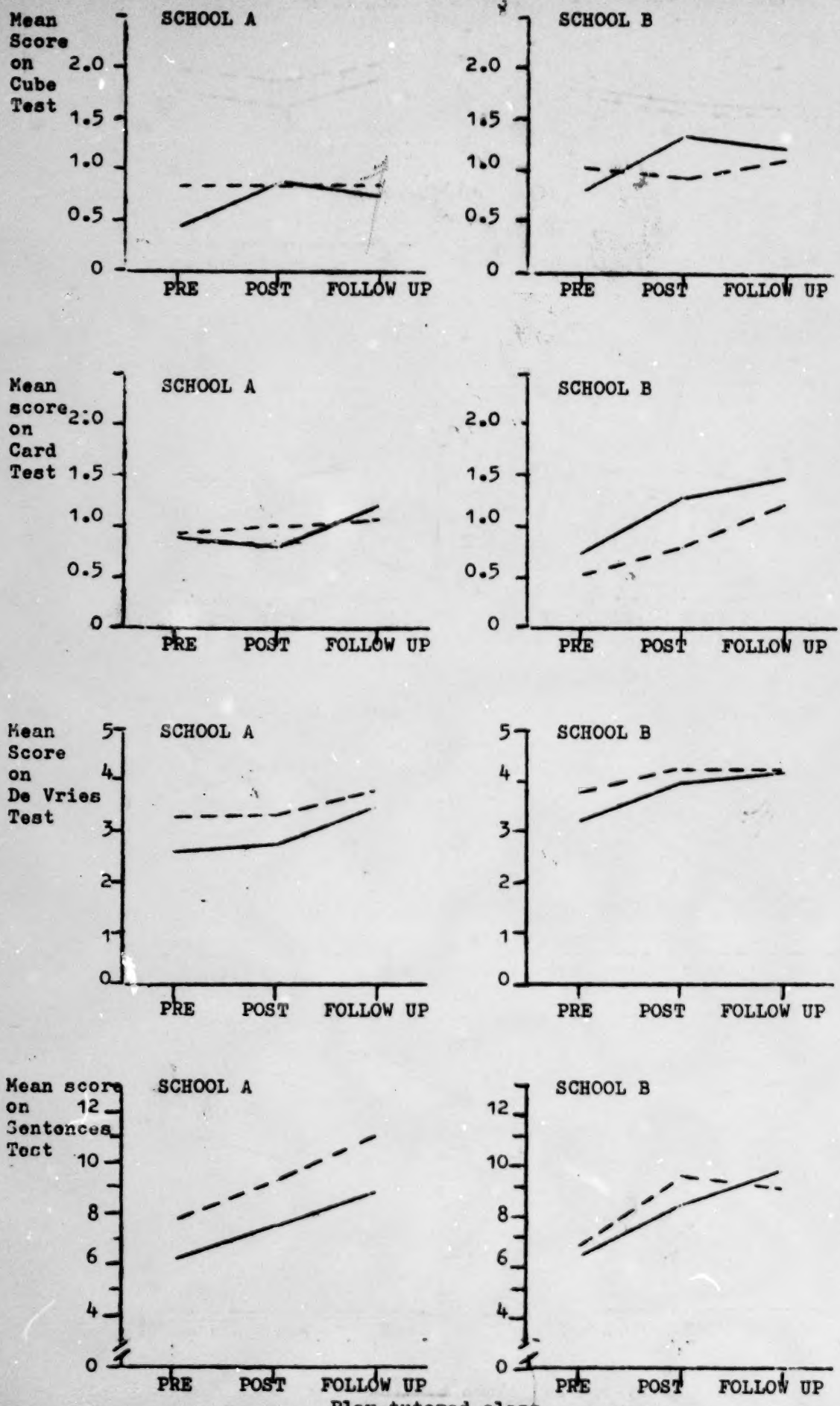


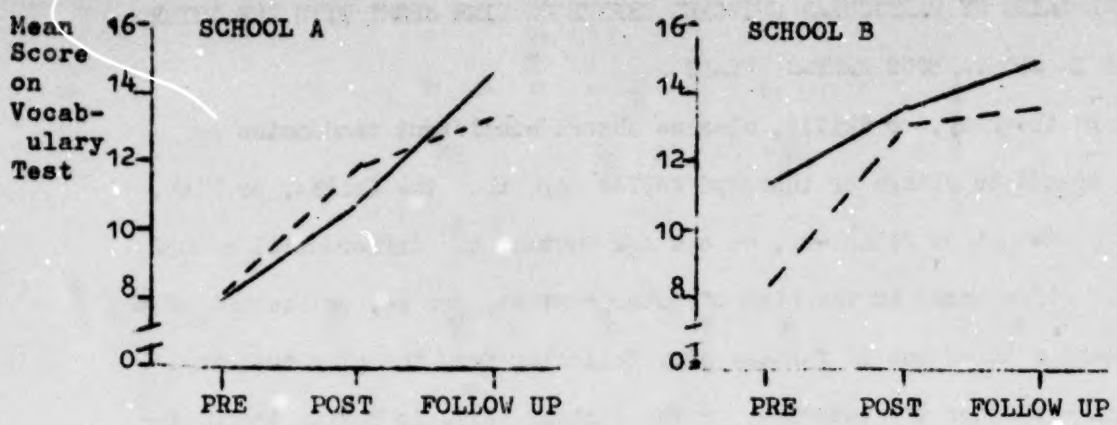


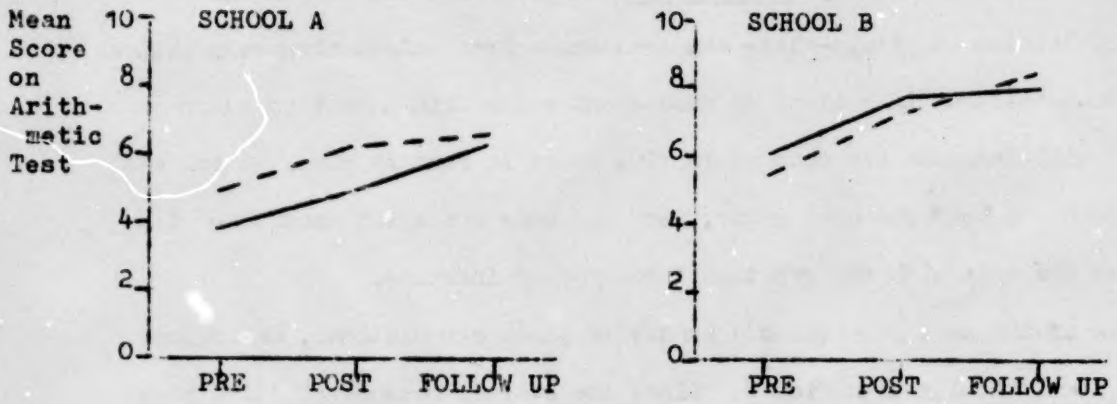


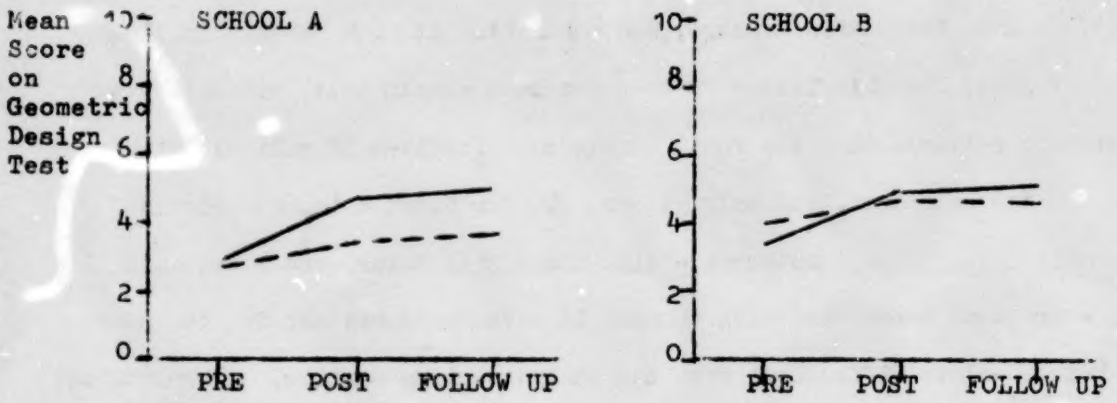


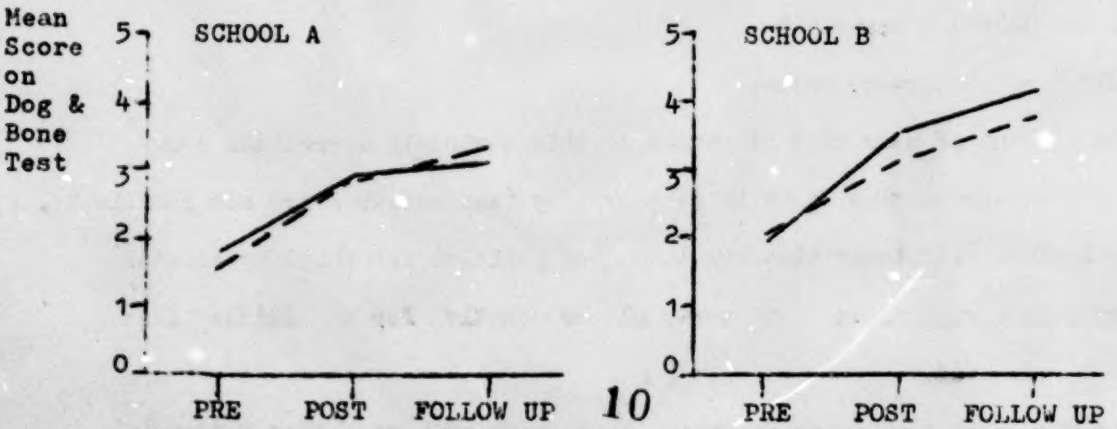
Play-tutored class ——————
Skills-tutored class - - - - -


Mean Score on Cube Test
SCHOOL A
SCHOOL B
2.0
1.5
1.0
0.5
0
PRE
POST
FOLLOW UP
Mean score on Card Test
Mean Score on De Vries Test
5
4
3
2
1
Mean score on Sentences Test
12
10
8
6
4
Play-tutored class
Skills-tutored class









Play-tutored class ——————
Skills-tutored class – – – –

DO ASSESSMENT GAINS BY PARTICULAR CHILDREN DEPEND ON TIME SPENT WITH THE TUTOR, OR INCREASES IN SPONTANEOUS FANTASY PLAY?

In cases where the Play, or Skills, classes showed consistent tendencies or significant trends to change or increase scores more than the Skills, or Play, classes, at post-test or follow-up, we can ask whether the differential change is because of differences in the kind of tutor contact, per se, or because of the different changes in amount of fantasy play following from the play tutoring. This question - whether the tutoring, or the fantasy play, is having the most effect - was earlier examined by <u>between-class</u> comparisons; but we can also examine it by looking at <u>within-class</u> comparisons. From calculating correlations over individual children in a class of assessment gains with amount of tutor contact, and with increase (or change) in time spent in fantasy play, we can see if the children who made the most gains, were the ones who spent most time with the tutor, or the ones with the greatest fantasy play increase.

The table on the next page shows a number of these correlations, underlined if they are statistically significant. Since the overall measure of 'time spent with tutor' correlated highly with most of the other more detailed measures of tutor contact, we have taken this measure, and contrasted it with 'change in time spent in fantasy play'; for this latter we used the scan sample data, since it was more statistically reliable than the focal sample data (split-half reliabilities were 58% and 60% for scan data, but only 51% and 24% for focal data, at Schools A and B respectively). These 2 measures - time spent with tutor, and change in fantasy play - are each correlated with changes in seven measures showing the most appreciable between-class differences from the analyses given earlier. Correlations are given for both pre-post assessment and pre - follow-up assessment changes, and for School A and School B separately.

The results are summarised below:

(1) change in percent of play that is fantasy: this obviously correlates very highly with change in time spent in fantasy play (the measures are not identical). The correlations with tutor time are small but positive for the Play classes (one correlation significant) and very small or negative for the Skills classes, as might be expected.

(2) change in amount of time spent in group play: both at post and at follow-up

WITHIN CLASS CORRELATIONS

		SCHOOL A				SCHOOL B			
		Tutor	FPino	Tutor	FPino	Tutor	FPino	Tutor	FPino
		Pre-post diffs		Pre-follow up diffs		Pre-post diffs		Pre-follow up diffs	
% of play that is fantasy	P	.51	.82	.43	.72	.24	.98	.15	.98
	S	-.27	.80	.02	.81	-.20	.96	.13	.97
% of time spent in group play	P	.26	.68	.24	.65	.38	.74	.13	.94
	S	-.37	.77	.06	.69	-.27	.78	-.25	.71
Group of more than three	S	.49	.23	-.22	.65	.28	.84	.19	.74
	P	-.15	.59	.62	.35	-.11	.71	-.24	.53
Nature of activity	P	.35	.21	-.17	-.24	.36	-.10	-.32	-.13
	S	.31	.05	.43	.22	.07	.19	-.03	.01
Cube test	P	-.03	-.33	-.01	.12	-.13	-.02	-.45	-.31
	S	.22	-.04	.11	-.18	-.08	.06	.20	.09
Geometric design test	P	-.26	-.16	.17	.51	.52	.28	.14	.41
	S	-.05	.35	-.17	.12	.01	.11	-.07	.04
Vocabulary test	P	.14	.11	.49	.05	-.07	-.14	-.08	-.14
	S	-.17	.16	-.30	.09	.27	.25	.24	-.29

P: Play tutored class S: Skills tutored class
Tutor: time spent with tutor (total) FPino: change in time spent in fantasy play.

assessment this correlates highly with change in fantasy play. Correlations with tutor time are smaller but positive in the Play classes, very small or negative in the Skills classes.

(3) change in time spent in large subgroups (correlations are with time spent in subgroups of four or more, this being the main change in mean subgroup size): both at post and follow-up assessment this correlates, usually highly, with changes in fantasy play. Correlations with tutor time are usually smaller but are positive in the Play classes, and usually negative (except School A at follow-up) in the Skills classes.

(4) change in nature of activity: no very strong or consistent pattern to be seen.

(5) change in score on cube test: no very strong or consistent pattern to be seen.

(6) change in score on geometric design test: rather mixed results; at School B the Play class has positive correlations with tutor time at post test not at School A. At follow-up, a tendency at both Schools for positive correlations with change in fantasy play, for Play classes only.

(7) Change in score on vocabulary test: no very strong or consistent pattern to be seen.

In summary, the changes in time spent in group/associative play, and in large subgroups of four or more children, are correlated much more with changes in fantasy play than with time spent with tutor. For the other measures, changes cannot be linked more closely to the play than the tutoring.

CONCLUSIONS

By and large, the [illegible] Play and the Skills tutoring were similar - in particular as regards attention[illegible]) span, complexity of play, card test (role-taking), sentences and arithmetic subscales of the W.P.P.S.I., dog and bone test (creativity). This emerged from between-class comparisons, at both Schools.

The cube test (role-taking) and geometric design subscale of the W.P.P.S.I. showed a tendency to improve more in the Play classes, the vocabulary subscale of the W.P.P.S.I. more in the Skills classes. However for the cube and vocabulary tests the effects had disappeared at follow-up, and within-class correlations failed to link gains consistently to either time spent with tutor or change in fantasy play. Only in the case of the geometric design test does an effect remain at follow-up, and there is some support from within-class correlations for the importance of fantasy play per se; but this finding certainly stands in need of independent confirmation.

Both between-class comparisons and within-class correlations show that play tutoring favours group play, and large subgroups; this tended to persist at follow-up, and is related to fantasy play per se and is not just a general tutoring effect. The finding agrees with the recent report by Smith & Syddall (1978). A shift to more physical activities seems also to be a consequence of play tutoring.

SUMMARY

Both play and skills tutoring are probably worthwhile, mainly because of the close adult contact involved. The only specific advantage to play tutoring well substantiated in this study are, besides an increase in fantasy play itself, a greater general increase in active social play, especially in large subgroups.